

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (currently amended) An ink ~~ink~~ for ink-jet recording containing an insoluble dye ~~a coloring material~~, a humectant, a penetrant, water, and an amphiphilic star block polymer comprising a core and arms, the surface tension of the ink at 25°C being in a range of 20 to 50 mN/m, wherein each of said arms has a hydrophobic segment and a hydrophilic segment, and the hydrophilic segment is located at the end of the arm farthest from the core.
2. (original) The ink of Claim 1, wherein the viscosity at 25°C is in a range of 1 to 10 mPa • s.
3. (currently amended) An ink cartridge including ink for ink-jet recording, the ink containing an insoluble dye ~~a coloring material~~, a humectant, a penetrant, water, and an amphiphilic star block polymer comprising a core and arms, the surface tension of the ink at 25°C being in a range of 20 to 50 mN/m, wherein each of said arms has a hydrophobic segment and a hydrophilic segment, and the hydrophilic segment is located at the end of the arm farthest from the core.

4. (currently amended) A recording apparatus including ink for ink-jet recording, the ink containing an insoluble dye ~~a coloring material~~, a humectant, a penetrant, water, and an amphiphilic star block polymer comprising a core and arms, the surface tension of the ink at 25°C being in a range of 20 to 50 mN/m, wherein each of said arms has a hydrophobic segment and a hydrophilic segment, and the hydrophilic segment is located at the end of the arm farthest from the core; and
wherein recording is performed by jetting the ink onto a recording medium.

5. (currently amended) An ink for ink-jet recording containing an insoluble dye ~~a coloring material~~, a humectant, a penetrant, water, and an amphiphilic heteroarm star polymer, the surface tension of the ink at 25°C being in a range of 20 to 50 mN/m, wherein the amphiphilic heteroarm star polymer has a hydrophobic segment and a hydrophilic segment, and the hydrophilic segment disperses the insoluble dye in an ink composition.

6. (original) The ink of Claim 5, wherein the viscosity at 25°C is in a range of 1 to 10 mPa • s.

7. (currently amended) An ink cartridge including ink for ink-jet recording, the ink containing an insoluble dye ~~a coloring material~~, a humectant, a penetrant, water, and an amphiphilic heteroarm star polymer, the surface tension of the ink at 25°C being in a range of 20 to 50 mN/m, wherein the amphiphilic heteroarm star polymer has a

hydrophobic segment and a hydrophilic segment, and the hydrophilic segment disperses the insoluble dye in an ink composition.

8. (currently amended) A recording apparatus including ink for ink-jet recording, the ink containing an insoluble dye ~~a coloring material~~, a humectant, a penetrant, water, and an amphiphilic heteroarm star polymer, the surface tension of the ink at 25°C being in a range of 20 to 50 mN/m,

wherein recording is performed by jetting the ink onto a recording medium,
the amphiphilic heteroarm star polymer has a hydrophobic segment and a hydrophilic segment, and
the hydrophilic segment disperses the insoluble dye in an ink composition.

9. (currently amended) An ink ~~ink~~ for ink-jet recording containing an insoluble dye ~~a coloring material~~, water, a surface-active material, and an additive composed of a hydrophobic segment that attaches to said insoluble dye ~~coloring material~~ and a hydrophilic segment located outside of said hydrophobic segment, the surface tension of the ink at 25°C being in a range of 20 to 50 mN/m.